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EXAMINER	
CHAPEL, DEREK S	

ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/562,231	BENOIT, PASCAL	
	Examiner	Art Unit	
	Derek S. Chapel	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 12-28* is/are rejected.

7)☒ Claim(s) *5-11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 December 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/21/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status Of Claims

1. It is noted that the remarks received on 12/21/2005 submit a new set of amended claims (1-13). However, the original claims (1-15) were not cancelled and are therefore still pending. As per rule 37 CFR 1.121 the amended claims (1-13) have been renumbered as 16-28.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in France on 7/1/2003. It is noted, however, that applicant has not filed a copy of the certified copy of the 0307956 application as required by 35 U.S.C. 119(b). Therefore, the priority date of 7/1/2003 is not given to the applicant until a certified copy of 0307956 is received.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "A" and "A'" have both been used to designate AA'. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted

after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

It is noted by the examiner that Figure 2 also has "P" and "P'" both being used to designate PP'.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. **The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.** The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because:

a. "comprises" should be changed to --includes-- the first line of the abstract;

b. "the said polarization" should be changed to --the polarization-- on line 8 of the abstract.

Correction is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities:

a. "polarisation splitter" needs to be changed to --polarization splitter-- on line 24 of page 3 of the specification;

b. "light beam by the first splitter is not same as the same the" does not make any sense on line 30 of page 10 of the specification.

Appropriate correction is required.

Claim Objections

7. Claims 5-11 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim *should refer to other claims in the alternative only, and cannot depend from any other multiple dependent claim.* See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

8. Claim 1 recites the limitation "said modulated beam" in the sixth line of claim 1. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 12 recites the limitation "said modulated beam" in fifth line of claim 12. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 16 recites the limitation "said modulated beam" in the sixth line of claim 16. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 20 recites the limitation "said modulated beam" in the ninth/tenth lines of claim 20. There is insufficient antecedent basis for this limitation in the claim.

12. Claims 1, 16 and 20 are objected to because of the following informalities: "polarised" should be changed to --polarized-- on the last line of claims 1, 16 and 20.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is noted by the examiner that each colored beam cannot follow the same path throughout the entire optical motor and have the same polarization. This is due to the fact that each polarization beam splitter (PBS) splits the incoming beam into its respective s and p-polarization states which take separate paths through the optical motor (See Figure 1 of applicant's drawings). It is further noted that for the purpose of this examination, the "same path" that the different colored beams follow, having the same polarization, through the optical motor is the path from being reflected off the matrix imager (16), reflected off the splitting surface (19) of the first PBS (18) and exiting the first PBS.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1-2, 3/2, 3/1, 4/3/2, 4/3/1, 12-13, 14/13, 14/12, 15/14/13, 15/14/12 and 16-28 are rejected under 35 U.S.C. 102(a) as being anticipated by O'Donnell, European Patent Number EP 1337117 A1, of record (hereafter O'Donnell).

17. As to claim 1, O'Donnell teaches an illumination system that generates a light beam of variable color along an illumination axis (See Fig. 1 and Paragraph [0013]);

a matrix imager (See Fig. 1, Element 22), each pixel of which reflects the light beam with a polarization that depends on the image to be generated in the received color, the reflecting beam being a modulated beam (See Fig. 1 and Paragraphs [0013]-[0017]); and

a first polarization splitter (See Fig. 1, Element 16) adapted to transmit a polarization of the light beam of variable color in a first direction towards said matrix imager (See Fig. 1, Element 16 and the dark arrow toward Element 22)and to transmit, at least partially, said modulated beam in a second direction (See Fig. 1 and the dark arrow away from Element 22);

characterized by:

a second polarization splitter (See Fig. 1, Element 14) adapted to transmit the said polarization of the light beam of variable color in a third direction towards the first polarization splitter (See Fig. 1 and the dark arrow leaving polarization splitter 14 and heading into polarization splitter 16); modulated beam being polarized (See Fig. 1 and Paragraph [0015]).

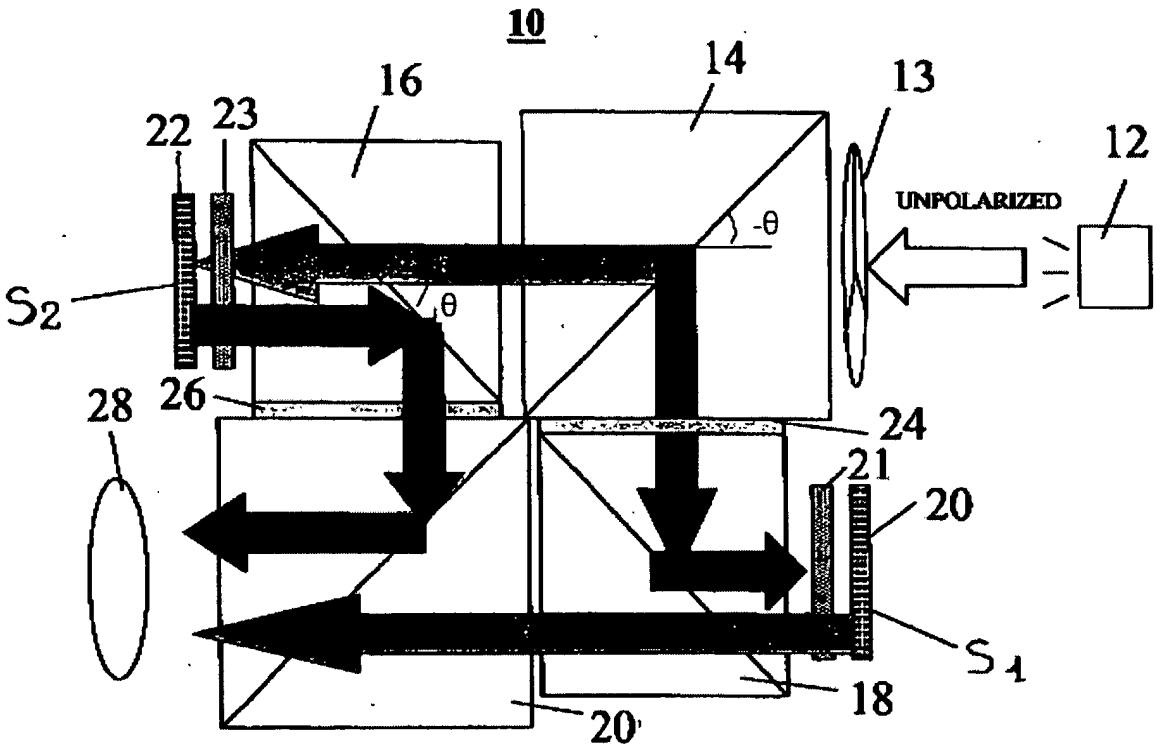
18. As to claim 2, O'Donnell teaches the combination of claim 1, wherein:

the splitting surface of the second polarization splitter is crossed by the polarization of the light beam of variable color, which is transmitted in the third direction (See Fig. 1, Element 14 and the dark arrow leaving polarization splitter 14 and heading into polarization splitter 16)

the splitting surface of the first polarization splitter is crossed by the polarization of the light beam of variable color, which is transmitted in the first direction (See Fig. 1, Element 16 and the dark arrow toward Element 22), and reflects the polarization of the modulated beam, which is transmitted in the second direction (See Fig. 1 and the dark arrow away from Element 22 and reflecting off of the splitting surface of 16).

19. As to claims 3/2 and 3/1, O'Donnell teaches the combinations of claims 1 and 2, in which the splitting surface of the first polarization splitter makes with the light beam an angle having a defined value in a first plane containing the light beam and in which the splitting surface of the second polarization splitter makes with the light beam an angle having an opposite value to the defined value in a second plane containing the light beam and parallel to the first plane (See specifically θ, $-\theta$ in Fig. 1 below as edited by the examiner).

FIG. 1



20. As to claims 4/3/2 and 4/3/1, O'Donnell teaches the combinations of claims 3, 2, and 1, in which the defined value is equal to 45° (See Paragraph [0018], Lines 36-37).

21. As to claims 12 and 16, O'Donnell teaches an optical motor adapted to receive a light beam of variable color along an illumination axis (See Fig. 1 and Paragraph [0013]), comprising:

a matrix imager (See Fig. 1, Element 22), each pixel of which reflects the light beam with a polarization that depends on the image to be generated in the received color, the reflecting beam being a modulated beam (See Fig. 1 and Paragraphs [0013]-[0017]); and

a first polarization splitter (See Fig. 1, Element 16) adapted to transmit a polarization of the light beam of variable color in a first direction towards said matrix imager (See Fig. 1, Element 16 and the dark arrow toward Element 22)and to transmit, at least partially, said modulated beam in a second direction (See Fig. 1 and the dark arrow away from Element 22);

characterized by:

a second polarization splitter (See Fig. 1, Element 14) adapted to transmit the said polarization of the light beam of variable color in a third direction towards the first polarization splitter (See Fig. 1 and the dark arrow leaving polarization splitter 14 and heading into polarization splitter 16); and

the optical motor being adapted to transmit a polarized modulated beam (See Fig. 1 and Paragraph [0015]).

22. As to claims 13 and 17, O'Donnell teaches the combination of claims 12 and 16, wherein

the splitting surface of the second polarization splitter is crossed by the polarization of the light beam of variable color, which is transmitted in the third direction (See Fig. 1, Element 14 and the dark arrow leaving polarization splitter 14 and heading into polarization splitter 16)

the splitting surface of the first polarization splitter is crossed by the polarization of the light beam of variable color, which is transmitted in the first direction (See Fig. 1, Element 16 and the dark arrow toward Element 22), and reflects the polarization of the

modulated beam, which is transmitted in the second direction (See Fig. 1 and the dark arrow away from Element 22 and reflecting off of the splitting surface of 16).

23. As to claims 14/13, 14/12 and 18, O'Donnell teaches the combination of claims 12, 13 and 16, in which the splitting surface of the first polarization splitter makes with the light beam an angle having a defined value in a first plane containing the light beam and in which the splitting surface of the second polarization splitter makes with the light beam an angle having an opposite value to the defined value in a second plane containing the light beam and parallel to the first plane (See specifically θ, $-\theta$ in Figure 1, as edited by the examiner, in section 19 of this office action).

24. As to claims 15/14/13, 15/14/12 and 19, O'Donnell teaches the combination of claims 12, 13, 14 and 18, in which the defined value is equal to 45° (See Paragraph [0018], Lines 36-37).

25. As to claim 20, O'Donnell teaches a display device comprising:

an illumination system that generates a light beam of variable color along an illumination axis (See Fig. 1 and Paragraph [0013]);

an the optical motor, being adapted to receive the light beam from the illumination system (See Fig. 1), the optical motor comprising:

a matrix imager (See Fig. 1, Element 22), each pixel of which reflects the light beam with a polarization that depends on the image to be generated in the received color, the reflected beam being a modulated beam (See Fig. 1 and Paragraphs [0013]-[0017]); and

a first polarization splitter (See Fig. 1, Element 16)adapted to transmit a polarization of the light beam of variable color in a first direction towards said matrix imager (See Fig. 1, Element 16 and the dark arrow toward Element 22)and to transmit, at least partially, said modulated beam in a second direction (See Fig. 1 and the dark arrow away from Element 22);

a second polarization splitter (See Fig. 1, Element 14)adapted to transmit the said polarization of the light beam of variable color in a third direction towards the first polarization splitter (See Fig. 1 and the dark arrow leaving polarization splitter 14 and heading into polarization splitter 16), the second polarization splitter being adjacent to the first polarization splitter, without any polarization element separating the first and second polarization splitters (See Fig. 1, Elements 14 and 16);

the modulated beam being polarized at the output of the display device (See Fig. 1 and Paragraph [0015]).

26. As to claim 21, O'Donnell teaches the combination of claim 20, wherein the first polarization splitter and the second polarization splitter are arranged symmetrically with respect to a plane perpendicular to the illumination axis (See Fig. 1).

27. As to claim 22, O'Donnell teaches the combination of claim 20, wherein the splitting surface of the first polarization splitter and the splitting surface of the second polarization splitter make between them an angle having an absolute value of about 90° (See Fig. 1, Elements 14 and 16).

28. As to claim 23, O'Donnell teaches the combination of claim 20, wherein the matrix imager lies on the illumination axis (See Fig. 1, Elements 12, 14, 16 and 22).

29. As to claim 24, O'Donnell teaches the combination of claim 20, wherein the first polarization splitter at least partly transmits said modulated beam in the direction of imaging means for display on a screen (It is noted by the examiner that the first polarization splitter partly transmits the modulated beam in the direction of imaging means for display on a screen in that it transmits the modulated beam toward the splitting surface of polarization splitter 20' which directs the beam toward a projection lens (28).).

30. As to claim 25, O'Donnell teaches the combination of claim 20, wherein the color of the light beam varies periodically among a plurality of colors (See Fig. 1, Elements 12 and 13 and Paragraph [0015]).

31. As to claim 26, O'Donnell teaches the combination of claim 20, wherein the illumination means comprise at least two color filters, the light beam passing periodically through each color filter (See Fig. 1, Elements 12 and 13 and Paragraph [0015]).

32. As to claim 27, O'Donnell teaches the combination of claim 20, wherein the light beam is of three different colors successively in each period (See Fig. 1, Elements 12 and 13 and Paragraph [0015]).

33. As to claim 28, O'Donnell teaches the combination of claim 20, wherein the light beam is of different colors, forming then sequential colored beams, each colored beam following the same path in the optical motor and having the same polarization (See Fig. 1 and the black arrow leaving element 22 and reflecting off of the splitting surface of element 16 and then reflecting off of the splitting surface of element 20' and then exiting

element 20' towards element 28; and also see the examiner's note in section 14 of this office action).

34. Claims 1-2, 3/2, 3/1, 4/3/2, 4/3/1, 12-13, 14/13, 14/12, 15/14/13, 15/14/12, 16-24 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Brennesholtz, U.S. Patent Number 6,280,034 (hereafter Brennesholtz).

35. As to claim 1, Brennesholtz teaches an illumination system that generates a light beam of variable color along an illumination axis (See Fig. 7 and Col. 6, Lines 52-65, Col. 7, Lines 24-35 and Col. 9, Lines 1-67; It is noted that for the purpose of this examination it will be interpreted by the examiner that the E-SPF (Element 82 in Figure 7) has been replaced by a color wheel, as taught by Brennesholtz.);

a matrix imager (See Fig. 7, Element 86), each pixel of which reflects the light beam with a polarization that depends on the image to be generated in the received color, the reflecting beam being a modulated beam (See Fig. 7 and Col. 9, Lines 9-50); and

a first polarization splitter (See Fig. 7, Element 85) adapted to transmit a polarization of the light beam of variable color in a first direction towards said matrix imager (See Fig. 7, Element 85 and the arrow toward Element 86)and to transmit, at least partially, said modulated beam in a second direction (See Fig. 7 and the arrow away from Element 86);

characterized by:

a second polarization splitter (See Fig. 7, Element 84) adapted to transmit the said polarization of the light beam of variable color in a third direction towards the first polarization splitter (See Fig. 7 and the arrow leaving polarization splitter 84 and heading into polarization splitter 85); modulated beam being polarized (See Fig. 7).

36. As to claim 2, Brennesholtz teaches the combination of claim 1, wherein:

the splitting surface of the second polarization splitter is crossed by the polarization of the light beam of variable color, which is transmitted in the third direction (See Fig. 7, Element 84 and the arrow leaving polarization splitter 84 and heading into polarization splitter 85)

the splitting surface of the first polarization splitter is crossed by the polarization of the light beam of variable color, which is transmitted in the first direction (See Fig. 7, Element 85 and the arrow toward Element 86), and reflects the polarization of the modulated beam, which is transmitted in the second direction (See Fig. 7 and the arrow away from Element 86 and reflecting off of the splitting surface of 85).

37. As to claims 3/2 and 3/1, Brennesholtz teaches the combinations of claims 1 and 2, in which the splitting surface of the first polarization splitter makes with the light beam an angle having a defined value in a first plane containing the light beam and in which the splitting surface of the second polarization splitter makes with the light beam an angle having an opposite value to the defined value in a second plane containing the light beam and parallel to the first plane (See Fig. 7).

38. As to claims 4/3/2 and 4/3/1, Brennesholtz teaches the combinations of claims 3, 2, and 1, in which the defined value is equal to 45° (It is noted by the examiner that

although Brennesholtz does not specifically disclose that the angle of the splitting surface of the four polarization beam splitters is 45°, it is inherent to the display device of Figure 7 that for a beam to be split into two beams at an apparent 90° angle and then recombined at an apparent 90° as shown in Figure 7, then the splitting surfaces would have to be oriented at 45°.).

39. As to claims 12 and 16, Brennesholtz teaches an optical motor adapted to receive a light beam of variable color along an illumination axis (See Fig. 7 and Col. 6, Lines 52-65, Col. 7, Lines 24-35 and Col. 9, Lines 1-67 and the examiner's note from section 35 of this office action), comprising:

a matrix imager (See Fig. 7, Element 86), each pixel of which reflects the light beam with a polarization that depends on the image to be generated in the received color, the reflecting beam being a modulated beam (See Fig. 7 and Col. 9, Lines 9-50); and

a first polarization splitter (See Fig. 7, Element 85) adapted to transmit a polarization of the light beam of variable color in a first direction towards said matrix imager (See Fig. 7, Element 85 and the arrow toward Element 86)and to transmit, at least partially, said modulated beam in a second direction (See Fig. 7 and the arrow away from Element 86);

characterized by:

a second polarization splitter (See Fig. 7, Element 84) adapted to transmit the said polarization of the light beam of variable color in a third direction towards the first

polarization splitter (See Fig. 7 and the arrow leaving polarization splitter 84 and heading into polarization splitter 85); and

the optical motor being adapted to transmit a polarized modulated beam (See Fig. 7).

40. As to claims 13 and 17, Brennesholtz teaches the combination of claims 12 and 16, wherein

the splitting surface of the second polarization splitter is crossed by the polarization of the light beam of variable color, which is transmitted in the third direction (See Fig. 7, Element 84 and the arrow leaving polarization splitter 84 and heading into polarization splitter 85)

the splitting surface of the first polarization splitter is crossed by the polarization of the light beam of variable color, which is transmitted in the first direction (See Fig. 7, Element 85 and the arrow toward Element 86), and reflects the polarization of the modulated beam, which is transmitted in the second direction (See Fig. 7 and the arrow away from Element 86 and reflecting off of the splitting surface of 85).

41. As to claims 14/13, 14/12 and 18, Brennesholtz teaches the combination of claims 12, 13 and 16, in which the splitting surface of the first polarization splitter makes with the light beam an angle having a defined value in a first plane containing the light beam and in which the splitting surface of the second polarization splitter makes with the light beam an angle having an opposite value to the defined value in a second plane containing the light beam and parallel to the first plane (See Fig. 7).

42. As to claims 15/14/13, 15/14/12 and 19, Brennesholtz teaches the combination of claims 12, 13, 14 and 18, in which the defined value is equal to 45° (See Fig. 7 and the examiner's amendment in section 38 of this office action).

43. As to claim 20, Brennesholtz teaches a display device comprising:

an illumination system that generates a light beam of variable color along an illumination axis (See Fig. 7 and Col. 6, Lines 52-65, Col. 7, Lines 24-35 and Col. 9, Lines 1-67 and the examiner's note from section 35 of this office action);

an the optical motor, being adapted to receive the light beam from the illumination system (See Fig. 7), the optical motor comprising:

a matrix imager (See Fig. 7, Element 86), each pixel of which reflects the light beam with a polarization that depends on the image to be generated in the received color, the reflected beam being a modulated beam (See Fig. 7 and Col. 9, Lines 9-50); and

a first polarization splitter (See Fig. 7, Element 85)adapted to transmit a polarization of the light beam of variable color in a first direction towards said matrix imager (See Fig. 7, Element 85 and the arrow toward Element 86)and to transmit, at least partially, said modulated beam in a second direction (See Fig. 7 and the arrow away from Element 86);

a second polarization splitter (See Fig. 7, Element 84)adapted to transmit the said polarization of the light beam of variable color in a third direction towards the first polarization splitter (See Fig. 7 and the arrow leaving polarization splitter 84 and heading into polarization splitter 85), the second polarization splitter being adjacent to

the first polarization splitter, without any polarization element separating the first and second polarization splitters (See Fig. 7, Elements 84 and 85);

the modulated beam being polarized at the output of the display device (See Fig. 7).

44. As to claim 21, Brennesholtz teaches the combination of claim 20, wherein the first polarization splitter and the second polarization splitter are arranged symmetrically with respect to a plane perpendicular to the illumination axis (See Fig. 7).

45. As to claim 22, Brennesholtz teaches the combination of claim 20, wherein the splitting surface of the first polarization splitter and the splitting surface of the second polarization splitter make between them an angle having an absolute value of about 90° (See Fig. 7, Elements 84 and 85).

46. As to claim 23, Brennesholtz teaches the combination of claim 20, wherein the matrix imager lies on the illumination axis (See Fig. 7, Elements 81, 84, 85 and 86).

47. As to claim 24, Brennesholtz teaches the combination of claim 20, wherein the first polarization splitter at least partly transmits said modulated beam in the direction of imaging means for display on a screen (It is noted by the examiner that the first polarization splitter partly transmits the modulated beam in the direction of imaging means for display on a screen in that it transmits the modulated beam toward the splitting surface of polarization splitter 88 which directs the beam toward a projection lens (90).).

48. As to claim 28, Brennesholtz teaches the combination of claim 20, wherein the light beam is of different colors, forming then sequential colored beams, each colored

beam following the same path in the optical motor and having the same polarization (See Fig. 7 and the arrow leaving element 86 and reflecting off of the splitting surface of element 85 and then reflecting off of the splitting surface of element 88 and then exiting element 88 towards element 90; and also see the examiner's note in section 14 of this office action).

Claim Rejections - 35 USC § 103

49. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

50. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brennesholtz, U.S. Patent Number 6,280,034 (hereafter Brennesholtz) in view of Doany et al., U.S. Patent Number 5,984,478 (hereafter Doany).

51. As to claim 25, Brennesholtz teaches the combination of claim 20.

Brennesholtz does not specifically disclose that the color of the light beam varies periodically among a plurality of colors, that the illumination means comprises at least two color filters with the light beam passing periodically through each color filter, or that the light beam is of three different colors successively in each period because Brennesholtz does not give details as to how a color wheel functions.

However, Doany teaches a color sequential projection display wherein the color of the light beam varies periodically among a plurality of colors, the illumination means

comprises at least two color filters with the light beam passing periodically through each color filter, and the light beam is of three different colors successively in each period (See Figures 1A and 2A and the Abstract of Doany).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a standard color wheel such as the one taught by Doany in the system of Brennesholtz for the purpose of producing a periodic change in color in an image projection display system.

Double Patenting

52. Applicant is advised that should claims 12-15 be found allowable, claims 16-19 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Conclusion

53. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek S. Chapel whose telephone number is 571-272-8042. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Derek Chapel
DSC
8/3/2006

Amel C. Lavarias
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Primary Examiner
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